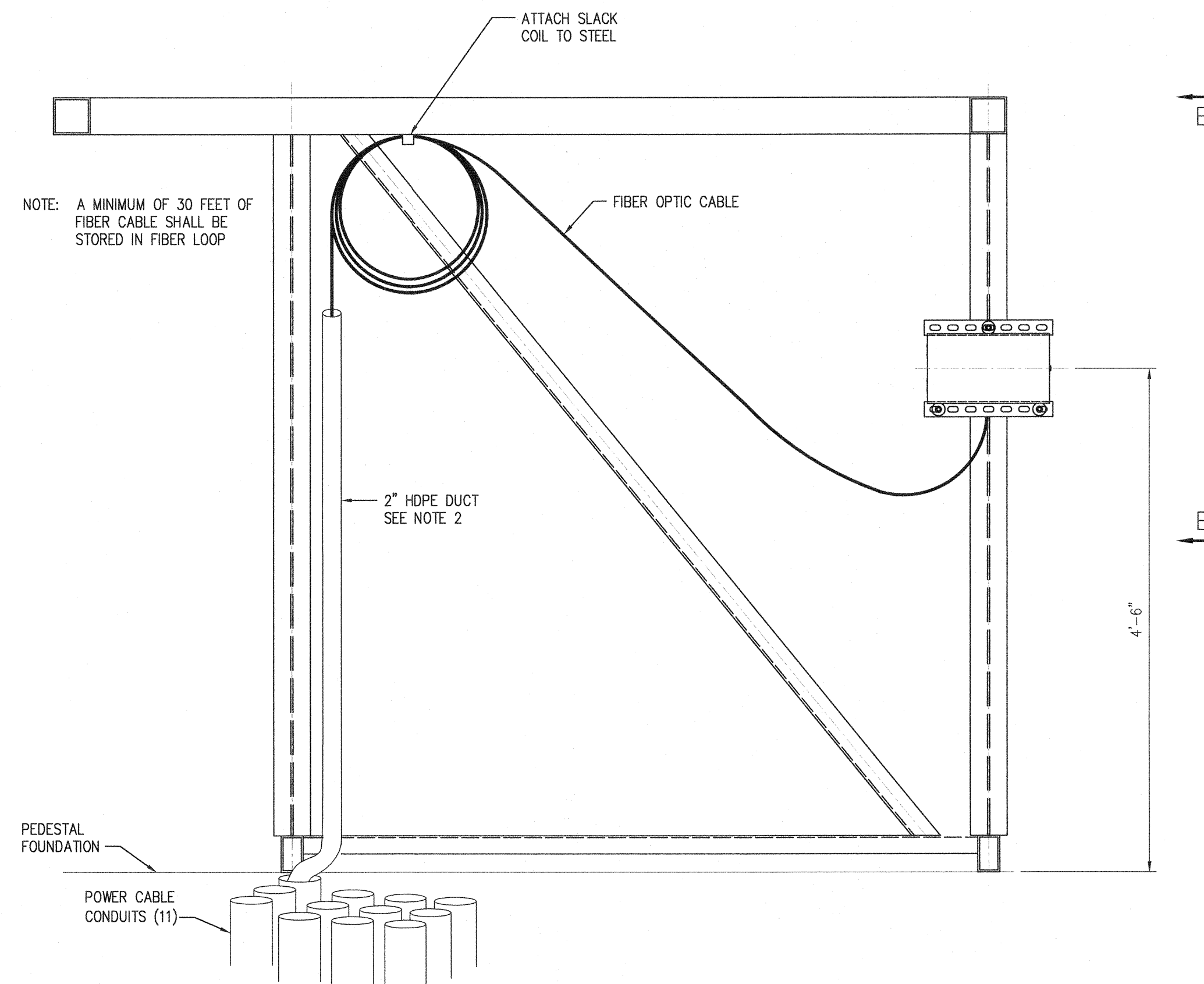
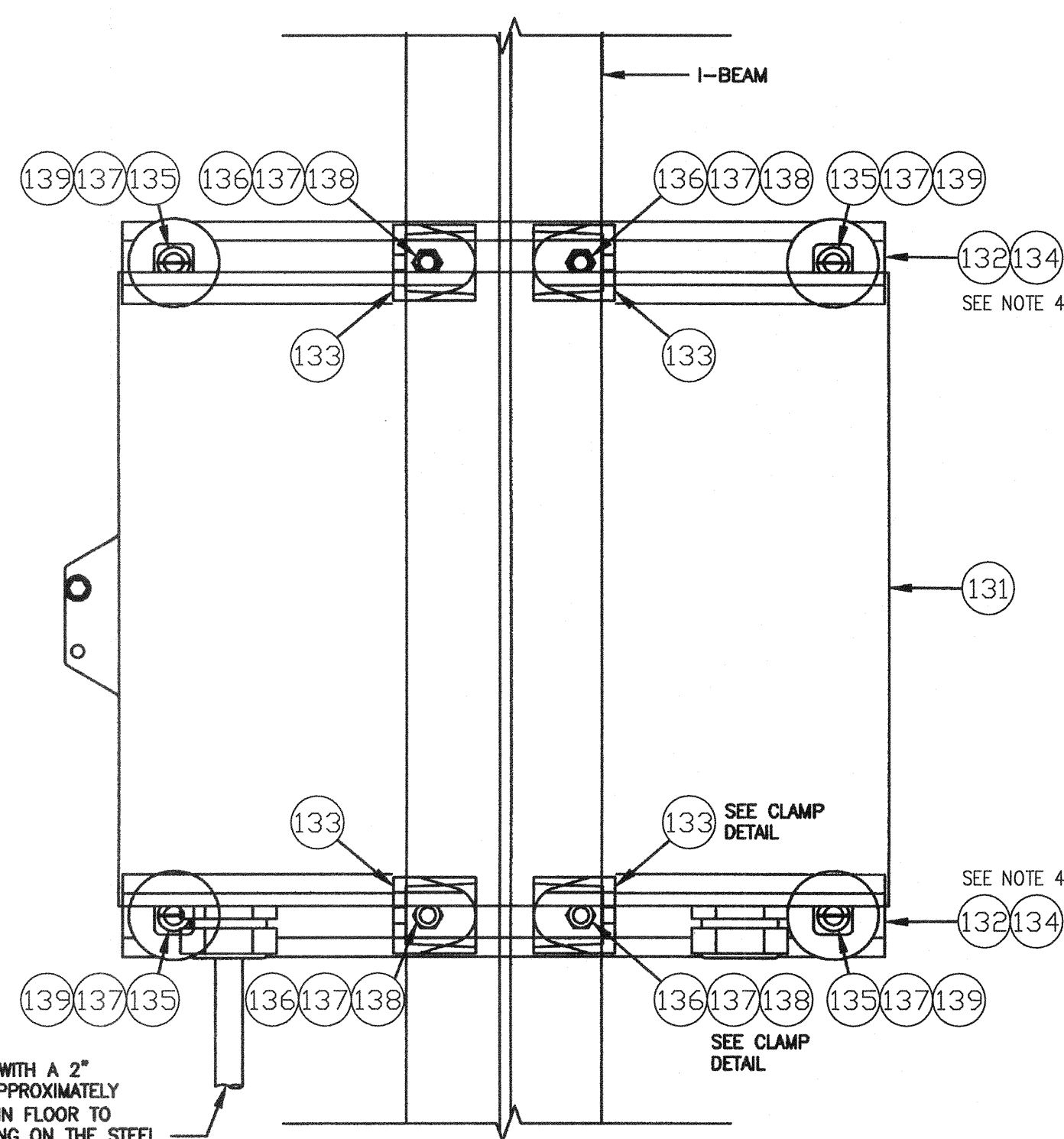


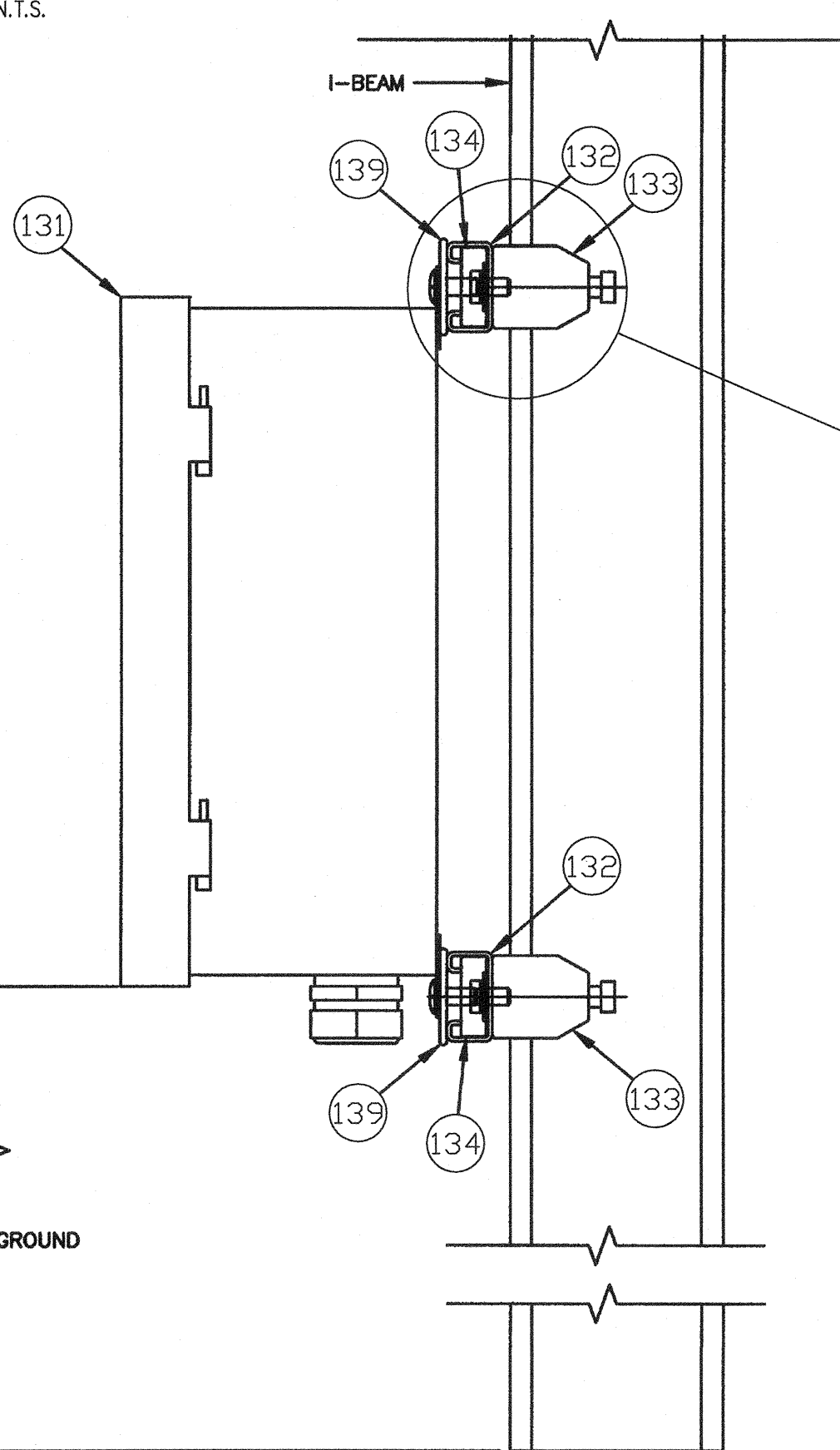
PLAN VIEW
SCALE: N.T.S.



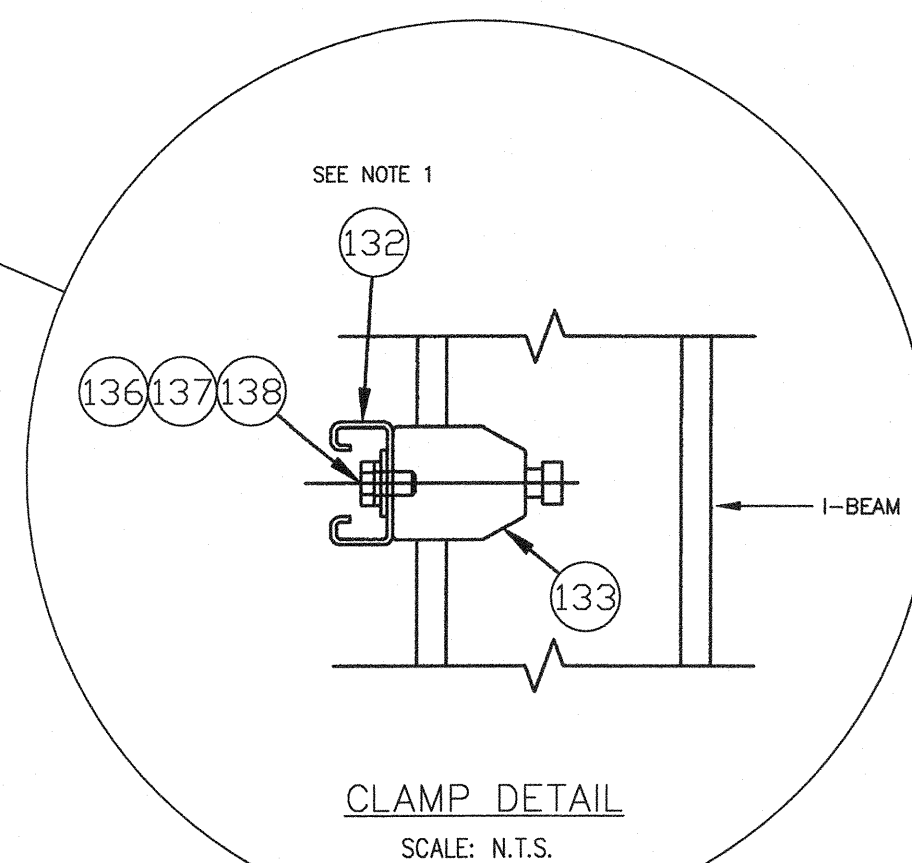
SECTION A--A
SCALE: N.T.S.



ELEVATION
SCALE: N.T.S.



SECTION B--B
SCALE: N.T.S.



CLAMP DETAIL
SCALE: N.T.S.

BILL OF MATERIALS - FIBER OPTIC PANEL						
ITEM	QUANTITY	UNIT	DESCRIPTION	MANUFACTURER	CATALOG	
131	1	EA	OUTDOOR WALLBOX ASSEMBLY, TYPE FDS 24	CLEARFIELD	WDZ-024-A1F-ZZZ	
132	2	EA	UNISTRUT X 15"	POWERSTRUT	PS-500	
133	4	EA	BEAM CLAMP, TYPE 501	WESTCO	78599150954	
134	4	EA	UNISTRUT CLAMPING NUT	POWERSTRUT	PS SS	
135	4	EA	5/16" X 3/4" ROUND HEAD MACHINE SCREW, TYPE 31161504	FASTENAL	27737	
136	4	EA	5/16" X 1/2" HEX HEAD BOLT, TYPE 31161561	FASTENAL	13051	
137	8	EA	5/16" LOCK WASHERS, TYPE 31161801	FASTENAL	33620	
138	4	EA	1/16" FLAT WASHER, TYPE 31161800	FASTENAL	33216	
139	4	EA	5/16" X 1-3/4" X 1/8" FENDER WASHER, TYPE 31161807	FASTENAL	33086	

NOTES:

- EACH PAIR OF FIBER STRAND CONNECTORS SHOULD BE LABELED. AN ADDITIONAL LABEL INDICATING THE OUTBOUND DESTINATION ASSIGNMENT MUST BE PROVIDED IN THE ENCLOSURE. SEE FIBER DRAWING E-FL-30, E-FL-31, E-FL-32, E-FL-33, E-FL-34, E-FL-35.
- TERMINATE AND CLOSE END AT TRACER WIRE WITH SHRINK TUBE. PUSH TRACER WIRE INTO HDPE DUCT.
- PANEL TO BE LABELED ACCORDING TO SIEMENS SPECIFICATION.
- FIELD DRILL 3/8" INCH DIA. MOUNTING HOLES IN UNISTRUT AS NEEDED.

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Scale: N.T.S.
Date: 07/08/11
Drawn: RJG
Checked: CSF
Designed: RJG
Approved: JLM

MINNESOTA POWER
AN ALLETE COMPANY

Bison

A WIND ENERGY INITIATIVE OF MINNESOTA POWER IN NORTH DAKOTA

BISON 3 WIND PROJECT
MORTON & OLIVER COUNTIES, NORTH DAKOTA
COLLECTOR SYSTEM
FIBER OPTIC PANEL DETAIL

BARR PROJECT No.
34/33-1006
CLIENT PROJECT No.

DWG. No.
E-FD-31
REV. No.
1

NO.	BY	CHK	APP.	DATE	REVISION DESCRIPTION
A	RJG	CSF	CSF	7/8/11	90% DELIVERABLE
B	BNK	CSF	CSF	8/16/11	REVISED PER CLIENT COMMENTS
C	BNK	RJG	CSF	9/20/11	REVISED PER CLIENTS COMMENTS
O	BNK	RJG	JLM	10/4/11	ISSUED FOR CONSTRUCTION
1	NJG			11/28/12	CONSTRUCTION REVISIONS

KENNETH J. BENNETT
PROFESSIONAL ENGINEER
DATE: 11-28-12
REV: 1
NORTH DAKOTA

CLIENT	7/8/8/16/9/20/10/4
BID	
CONSTRUCTION PERMITTING	
RELEASED TO/FOR	A B C O 1 2 3
DATE RELEASED	

Images in Drawing